Michigan Education Organization and Finance Research Brief Part II: State School Finance Best Practices

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Purpose Statement

This brief will focus on education finance lessons and best practices from other states and locations. The ideas presented are to aid the state Board of Education as it develops recommendations for school organization and finance in the Michigan. The purpose of the recommendations is to further the SBE mission: *All students graduate ready for careers*, *college, and community*. A final report concluding the series will identify research-based solutions to specific issues to support policy changes. Any policy recommendations will be made bearing in mind that the state education system is in service to the student, and that every student deserves access to a quality education.

Background

The Michigan Education Organization and Finance Research Brief, published in October, outlined a host of education financing challenges facing the state, brought on by a change in demographics, the decline in the Michigan economy, and the expansion of choice options for Michigan students. These changes have strained the existing education finance system conceived with Proposal A, suggesting the time is right for review and updates to the state finance system. Proposal A served the state well during prosperous times, and has helped reduce inequities in the Michigan education funding system. Modifications to the Proposal A funding mechanism may help improve the system and stabilize education funding in the state, benefiting students and Michigan families for years to come.

This brief will survey the education finance models used by many other states to uncover key principles underlying successful systems, and identify best practices that if employed in Michigan, would improve the existing system. States examined include states that are "similar" to Michigan in terms of demographics and location, such as Ohio, and states that are either high achievers, or perceived to be reform leaders, such as Massachusetts, Florida and Maryland. This

brief is not intended to be an exhaustive survey of other state systems, rather a sampling of systems to generate ideas.

First is a summary of general principals and potential lessons/leading practices from other states. Then, starting with Michigan, state education systems are examined over the following dimensions: demographics, school organization, school finance system, and achievement results. Michigan is the logical starting point for comparisons, and is presented first. The brief then moves on to study education systems in a group of states that are similar to Michigan. Next, a group of states chosen for their reputation as education leaders is examined. A table with additional state statistics appears in Appendix A.

I. Lessons from State Systems

"Education is perhaps the most important function of state and local governments (Brown v. Board of Education of Topeka Kansas)."

Culture of Investing in Education Since Schultz (1959) linked the United States rate of economic growth to "human wealth" investments in education, most policymakers believe that investing in education is good for the economy. While there is agreement in principal, Leachman & Mai (2013) report that most states are funding education at lower levels than before the 2008 recession due in part to a new attitude of austerity. State's that are consistently high performers on the National Assessment of Education Progress (NAEP) test, and that have a reputation for high quality schools, however, have increased their investments in education since 2008.

<u>Commitment to a High Quality System</u> Many states express a commitment to high quality schools, not only through their commitment to school funding, but through a strong constitutional provision for education, rigorous standards, and regular intervention and oversight both of charter schools and failing schools.

Different students require different levels of funding. Baker, Sciarra, & Farrie (2012) define fair school funding as "a state finance system that ensures equal educational opportunity by providing a sufficient level of funding distributed to districts within the state to account for the additional needs generated by student poverty (p. 5)." These authors note that student poverty is

the most important factor related to achievement, and feel state finance systems should provide increased funding to students living in poverty. The Education Law Center of Pennsylvania (2013) in a survey of state education financing systems found that many states direct additional funding to students with special needs including low-income students, English language learners, and students with disabilities. Baker & Corcoran (2012) describe an idealized state aid model where state aid is used to equalize local revenue inputs for districts with varying property tax resources and also provides need-based aid to districts where additional spending is needed to provide an equal educational opportunity (See Figure 1). Precise funding to direct resources to students and districts according to their needs can be accomplished using categorical grants or weights for grades, facilities, transportation, labor rates, cost of living, rural location, at-risk status, ELL, etc.

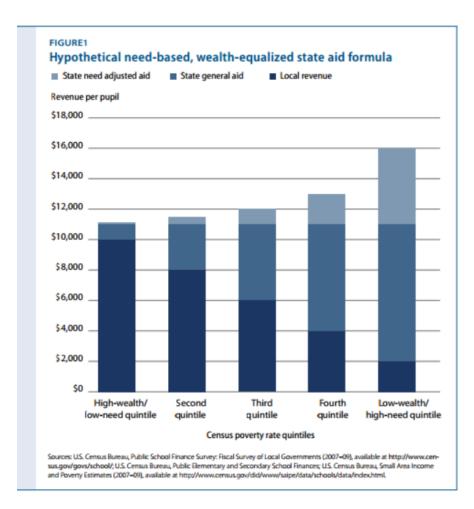


Figure 1. Hypothetical State Aid Formula by Census Poverty Rate Quintile, from Baker & Corcoran (2012).

Pursuit of the "Fiscal Neutrality" Equity Standard Yinger (2004) describes this as a state finance system where the quality of education provided by a school district is not correlated with the "balance between its taxing capacity (i.e. wealth) and spending requirements outside its control (i.e. costs), p. 14." In other words, educational outcomes are the same, regardless of the wealth of the school district, or the costs to educate students due to their characteristics. Balancing student needs is addressed above; this lesson refers to a state's balancing of the playing field so that property wealth does not influence educational outcomes.

Investing in Teacher Quality There is a wealth of academic research confirming that good teachers have a significant impact on student outcomes (Hanushek, 1986, 1997; Chetty, Friedman, & Rockoff 2011; Kane & Staiger, 2011). Recruiting, training, developing, and retaining quality teachers should be a high priority in any state that is serious about providing a high quality education for its children. There is a tension, however, between attracting a new generation of talented teachers to the field and issues around teacher compensation and evaluation. Some states approach the issue of teacher quality through regulation on the front end: more difficult admissions to teacher training programs and licensure criteria. Other states use value-added teacher evaluations to winnow out poor quality teachers, increasing the rate of turnover in the profession.

Funding Linked to Achievement The National Working Group on Funding Student Learning (2008) recommended that education funding be tied to academic goals and used to promote student learning. One way to create an education finance system that is integrated with achievement is to "remove the structures, rules, or practices that prevent educators from using resources effectively (National Working Group on Funding Learning, p. 18)." The goal is to adapt resources to meet the local need, and flexibility in using resources is key.

Support Quality and Innovation in the Development of Charter Schools An ideal state financing system would facilitate the development of choice and charters in a circumscribed manner, seeding innovative and high quality charter schools where they are needed. The financing and regulation of charter schools needs to be centered on the needs of the students, and the community. Molnar (1996) writes of charter school advocates who are reformers, "who want to expand public school options and provide the sort of creative tension they believe will help

improve all schools (p. 10)." Empowering these types of charter school supporters will benefit public education as a whole.

Finding the Revenue for a Quality Education State education finance systems can provide stable and predictable funding for school districts utilizing many different tax structures. Many states do not cap property taxes and allow voters and school districts to determine the level of investment in education in their community. Leachman & Mai (2103) suggest that states should be willing to raise additional revenue to maintain education funding levels.

<u>Adequately Funded, Portable Pension System</u> Doherty, Jacobs, & Madden (2013) recommend that states reform teacher pension systems to provide flexible, portable pension plan options that are fair, transparent, sustainable, and fully funded.

II. Michigan

Demographics

Michigan enrolled 1,587,067 students in public elementary and secondary school in 2010, the latest year available, according to the National Center for Education Statistics (NCES). School enrollment has been declining, and the 2010 enrollment reflected an almost 9% decline since 2005. The percentage distribution of white enrollment was 69%, and nonwhite enrollment of 31% included 19% African American, 6% Hispanic, and 3% Asian. Michigan has moderate levels of poverty, statewide, but has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 21.4% of 5 to 17 year-olds in Michigan were living in poverty, the national rate is 20.7%. NCES also reports that for the most recent year available, 2009-10, 45.9% of students in Michigan were eligible for free or reduced price lunch. Again, the national rate is 47.5%.

School Organization

Michigan currently has 549 school districts and 280 charter schools. The state is considered "choice friendly", allowing on-line learning, for-profit charter school operation, and multiple charter authorizers. Caps on the number of charter schools will disappear in FY2015. In FY2011, 7% of Michigan students attended charter schools. Over 100,000 students in Michigan participate in "Schools of Choice", a state program which provides students with

additional opportunities to choose to attend a school in their non-resident district. The program primarily encourages students to attend public schools in neighboring school districts, but also permits some choice within the resident district. The largest traditional public school district, Detroit Public Schools had enrollment in FY2013 of just over 49,000 students. The second largest district is Utica with 28,507 students. The National Heritage Academies charter school group has enrollment of 30,745 students in Michigan. The state has 57 Intermediate School Districts (ISDs), countywide or several-county organizations that coordinate special education services and federal categorical grants for a group of school districts. There is an initiative in Michigan to expand funding for preschool. Currently, 19% of four-year-olds attend state sponsored preschool, 15% of four-year-olds attend a federal head start program, and 66% of four-year-olds attend private or no preschool (National Institute for Early Education Research (NIEER), 2012). Twelve percent of elementary and secondary students in the state do not attend public school. These students are either homeschooled or attend private school. Michigan adopted the Common Core standards with full implementation expected 2012-13. The state is a member of the Smarter Balanced Assessment Consortium (SBAC). The state does offer dual enrollment/early college to students, but without adequate financing.

School Finance System

All per pupil spending amounts come from the United States Census Bureau report titled "Public Education Finances: 2011." According to the report, "tables containing revenue data refer to revenue from federal, state and local sources (pg.vi)." Current spending, as defined by the census bureau for the report includes direct expenditures for compensation, supplies and contractual services, but does not include any capital outlays. The census bureau found that Michigan spent on average \$10,823 per pupil in public elementary and secondary school for FY2011. The report notes that data from Michigan Public School Academies has been excluded due to a census bureau classification of such schools as "nongovernmental entities". The national average for per-pupil spending is \$10,560. In 1994, the State of Michigan adopted Proposal A, ushering in a highly centralized school financing system that has narrowed the gaps in per-pupil funding among school districts. Under Proposal A, the state assumed the responsibility for over 70% of the funding for Michigan public schools and strictly limited the local school districts' ability to raise revenues for school operations. (Israeli & Murphy, 2007;

Arsen & Plank, 2003; CRC, 2011; Addonizio & Kearney, 2012). The state uses a foundation allowance system, where the foundation allowance grant, determined by the state, follows students to the school that they attend. School district revenues from the state are determined by multiplying the foundation allowance by the student membership, measured by counts taken in the fall and winter of the school year. The state provides additional funding through categorical grants. Figure 2 shows per pupil state and local revenues by property wealth quintile, and indicates that the wealthiest districts have the highest per pupil revenues, although the state provides relatively more revenue to the poorest districts.

State financial support for public education in Michigan is provided by the School Aid Fund, financed primarily through the 6% sales tax, state income tax, a state education tax of 6-mills from property taxes (not subject to the Headlee rollback) and several other smaller taxes including a real-estate transfer tax, tobacco and liquor taxes, and lottery profits. The sales tax, income tax, and state education property tax together provide over 80% of school aid fund revenues. Local school districts are required to assess an additional 18 mills for education which is returned to the state, and are permitted to assess millages for school facilities bond payments, maintenance related sinking funds and countywide special education and vocational training.

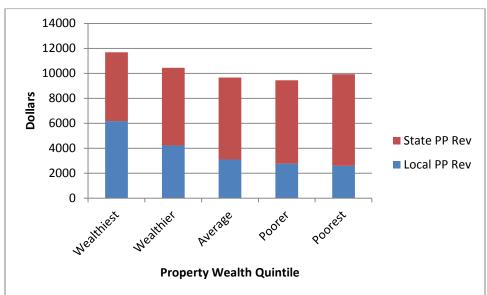


Figure 2. Michigan Per Pupil State and Local Revenues by Property Wealth Quintile for FY2009. Data from NCES Common Core of Data, excludes Charter Schools, includes some revenue from outside the General Fund (such as food service revenue, debt service revenue, athletics revenue)

Achievement Results

According to NCES, Michigan's Average Freshman Graduation Rate for school year 2009-10 (the most recent available) was 75.9%. The national average is 78.2%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 220 (U.S. average 221), 37% of students were at Proficient or above.
- 4th Grade Math scale score of 236 (U.S. average 244), 30% of students were at Proficient or above.
- 8th Grade Reading scale score of 260 (U.S. average 263), 33% of students were at Proficient or above.
- 8th Grade Math scale score of 278 (U.S. average 285), 31% of students were at Proficient or above.

III. States "similar" to Michigan (PA, IN, GA, OH)

Ohio

Demographics

Ohio enrolled 1,754,191 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has been declining, and the 2010 enrollment reflected an almost 5% decline since 2005. The percentage distribution of white enrollment was 74%, and nonwhite enrollment of 26% included 16% African American, 3% Hispanic, and 2% Asian. Ohio has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 21.9% of 5 to 17 year-olds in Ohio were living in poverty. NCES also reports that for the most recent year available, 2009-10, 40.3% of students in Ohio were eligible for free or reduced price lunch.

School Organization

Ohio currently has 613 school districts and 369 charter schools. The state is considered "choice friendly", allowing on-line learning, for-profit charter school operation, and multiple charter authorizers. In FY2011, 5% of Ohio students attended charter schools. Ohio has an

"Open Enrollment" program where students may choose to attend a neighboring school district instead of their district of residence. Approximately 63,000 students currently participate in open enrollment. Ohio has three urban school districts with over 30,000 student enrolled: Columbus, Cleveland, and Cincinnati. Columbus is the largest district in Ohio with 50,630 students in FY20012. The state also has 55 Educational Service Centers (ESCs), countywide or several-county organizations that coordinate special education services and federal categorical grants for a group of school districts. Currently in Ohio, 7% of four-year-olds attend state sponsored preschool (includes state sponsored special education), 13% of four-year-olds attend a federal head start program, 2% attend a locally sponsored preschool, and 78% of four-year-olds attend private or no preschool (NIEER, 2012). 15% of elementary and secondary students in the state do not attend public school. Ohio adopted the Common Core standards with full implementation expected 2014-15. Ohio is a member of the Partnership for Assessment of Readiness for College and Career (PARCC). Ohio offers a Post-secondary Enrollment Options program (PSEO) for early college, but the program does not have state level oversight and is inconsistently implemented.

School Finance System

The census bureau found that Ohio spent on average \$11,223 per pupil in public elementary and secondary school for FY2011. Ohio education funding is based on an adequacy foundation amount, considered the state's "building block". This is derived from the school district's "cost of doing business" based on salaries, benefits, maintenance, utilities and other factors. The state provides supplements to the foundation amount in the form of categorical grants, special education factors, and disadvantaged pupil impact aid.

Revenue is generated by a 23 mill property tax that is required by every school district. State aid is then the difference between the foundation amount and the revenue raised by the 23 mill tax. In some districts, this is \$9000 per pupil, in others, \$500 per pupil, depending on the property wealth of the district. Districts may supplement the foundation amount with the following taxes: Debt (bond), class facilities (bond), permanent improvements (property tax), current expenditures (property tax), current expenses (income tax), and emergency operations (property tax). Some of these additional property taxes require voter approval.

Achievement Results

According to NCES, Ohio's Average Freshman Graduation Rate for school year 2009-10 was 81.4%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 226, 48% of students were at Proficient or above.
- 4th Grade Math scale score of 244, 38% of students were at Proficient or above.
- 8th Grade Reading scale score of 268, 39% of students were at Proficient or above.
- 8th Grade Math scale score of 286, 41% of students were at Proficient or above.

Indiana

Demographics

Indiana enrolled 1,047,232 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has been increasing, and the 2010 enrollment reflected a 1.2% increase since 2005. The percentage distribution of white enrollment was 73%, and nonwhite enrollment of 27% included 12% African American, 8% Hispanic, and 2% Asian. Indiana has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 20.4% of 5 to 17 year-olds in Indiana were living in poverty. NCES also reports that for the most recent year available, 2009-10, 45.3% of students in Indiana were eligible for free or reduced price lunch.

School Organization

Indiana currently has 321 school districts and 75 charter schools. The state is considered "choice friendly", allowing on-line learning, and a state-wide voucher program. Charter schools are growing rapidly in the state with 10 new charter schools opened in 2012-13. In FY2011, 2% of Indiana students attended charter schools. Indiana has recently added an "Open Enrollment" program. It is unclear how many students currently participate in the program. Fort Wayne is the largest school district in Indiana, with just over 31,000 students. Indianapolis is second with enrollment around 30,000, with South Bend third with around 20,000 students. There are nine regional Educational Service Centers in Indiana that provide the following programs and

services: curriculum development, pupil personnel and special education services (defined in the Indiana Administrative Code section), in-service education, state and federal liaison services, instructional materials and multimedia services, services for career and technical education, assistance with financial planning and management, needs assessment services, assistance with computer use, and research and development services (Garcia, Shimmel, & Wraight, 2011). Currently in Indiana, government sponsored preschool is not available (NIEER, 2012). 12% of elementary and secondary students in the state do not attend public school. Indiana adopted the Common Core standards with full implementation expected 2014-15. Indiana is a member of the PARCC testing consortium. Indiana has three ways high school students can take college courses: the Postsecondary Enrollment Program, Double Up for College, and Fast Track to College.

School Finance System

The census bureau found that Indiana spent on average \$9,370 per pupil in public elementary and secondary school for FY2011. Indiana has long used a foundation program to finance education, where the state has guaranteed school districts base per pupil "foundation level" funding, with a "complexity" index based on the number of students in the district that are eligible for free or reduced price lunch. Further categorical grants for programs such as special education and career/technical education are added to the foundation amount. Like many states, Indiana has been challenged in court over the equity of their finance system. The foundation formula was changed in 1993 as a result of Lake central v. Indiana litigation and recent changes stem from Hamilton Southeastern Schools V. Daniels, litigation that was dropped in 2011 after the Indiana legislature again modified the school funding formula. One goal of the new formula is to ensure that funding more closely follows the student. Indiana's 1993 funding formula had provisions to temper the effects of declining enrollment by incorporating pupil counts over several years and providing "restoration" grants to districts to limit funding changes. The new formula adopted in 2011 eliminates these provisions, several other grants and cuts state educational spending overall by around 5% per pupil. The new law features a plan to transition "down to foundation" that continues through 2019 to spread the effects of losing funding over a long period of time. The new funding formula results in dramatic losses in school funding for urban districts facing strong charter competition such as Gary and Indianapolis. Districts with

growing enrollment will see their funding increase. Charter schools in general received increases in their per-pupil funding amounts (Indiana Department of Education, 2011; Spradlin, T. et al, 2011).

In 2009, Indiana decided that all school general fund revenues would be provided by the state, through revenue from a state sales tax. Local property taxes, previously used to enhance education spending at the discretion of the local school board were capped and are now only available for capital needs including facilities and technology. Local school districts, however, are permitted to override the property tax caps with voter approval (Stokes, 2012)

Achievement Results

According to NCES, Indiana's Average Freshman Graduation Rate for school year 2009-10 was 77.2%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 222, 52% of students were at Proficient or above.
- 4th Grade Math scale score of 243, 37% of students were at Proficient or above.
- 8th Grade Reading scale score of 264, 35% of students were at Proficient or above.
- 8th Grade Math scale score of 287, 38% of students were at Proficient or above.

Wisconsin

Demographics

Wisconsin enrolled 872,286 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has been stable to decreasing, and the 2010 enrollment reflected a 0.3% decrease since 2005. The percentage distribution of white enrollment was 74%, and nonwhite enrollment of 26% included 10% African American, 9% Hispanic, and 4% Asian. Wisconsin has at least one urban community with high rates of concentrated poverty. For 2011, NCES reports that 17.4% of 5 to 17 year-olds in Wisconsin were living in poverty. NCES also reports that for the most recent

year available, 2009-10, 37.1% of students in Wisconsin were eligible for free or reduced price lunch.

School Organization

Wisconsin currently has 426 school districts and 243 charter schools. The state is considered "choice friendly", allowing on-line learning, and a voucher program. Charter schools are expanding in the state with 23 new charter schools opened in 2012-13. In FY2011, 4% of Wisconsin students attended charter schools. Wisconsin offers an inter-district choice program, referred to as Open Enrollment, where approximately 30,000 students elect to attend a neighboring public school district each year. Milwaukee is the largest school district in Wisconsin, with just over 81,000 students. Madison is second with enrollment of around 25,000. Wisconsin has twelve Cooperative Education Service Agencies (CESA). The services provided by the CESAs vary by region, but some common service areas are instruction, technology, special education, alternative or vocational education, student programs, and professional development (Garcia, Shimmel, & Wraight, 2011). Currently in Wisconsin, 61% of four-yearolds attend state sponsored preschool (includes state sponsored special education), 8% of fouryear-olds attend a federal head start program, and 31% of four-year-olds attend private or no preschool (NIEER, 2012). 16% of elementary and secondary students in the state do not attend public school (Baker & Sciarra, 2012). Wisconsin adopted the Common Core standards with full implementation expected 2014-15. Wisconsin is a member of the Smarter Balanced testing consortium. Wisconsin offers several different high school dual enrollment options, including Youth Options (for nearly all colleges and universities in Wisconsin), Transcripted Credit through the WTCS, and College Credit in High School programs through the UW System.

School Finance System (Wisconsin Association of School Boards, 2012)

The census bureau found that Wisconsin spent on average \$11,774 per pupil in public elementary and secondary school for FY2011. School districts in Wisconsin receive revenue from four sources: State aid, property taxes, federal funding, and other sources such as fees, and gate receipts from athletic events. The amount of state aid a district receives is based on an equalization formula that "equalizes" the tax base of the district. The state also provides categorical aid for special education, transportation, ELL, and for the state class-size reduction

initiative, SAGE. School districts are subject to state revenue limits, and their maximum property tax levy is determined by subtracting their state aid from the revenue limit. Revenue limits are adjusted for declining enrollment, consolidations and boundary changes, and can also be exceeded if approved through a voter referendum. These referendum can be for recurring or non-recurring spending over the revenue limit. The state also supports education through the school levy tax credit and the first dollar credit. While considered part of the state's commitment to education, these credits are not paid to the schools. Instead, they are paid to local municipalities to lower property tax bills.

In the 2011-13 state budget, Wisconsin cut state aid to school districts by \$800 million and reduced district revenue limits by 5.5%. Enactment of Act 10, placing limits on collective bargaining for salaries and benefits, helped school boards cope with these cuts by enabling them to lower employee compensation.

Achievement Results

According to NCES, Wisconsin's Average Freshman Graduation Rate for school year 2009-10 was 91.1%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 221, 36% of students were at Proficient or above.
- 4th Grade Math scale score of 245, 45% of students were at Proficient or above.
- 8th Grade Reading scale score of 268, 33% of students were at Proficient or above.
- 8th Grade Math scale score of 287, 39% of students were at Proficient or above.

Georgia

Demographics

Georgia enrolled 1,677,067 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has been increasing, and the 2010 enrollment reflected an almost 5% increase since 2005. The percentage

distribution of white enrollment was 44%, and nonwhite enrollment of 56% included 37% African American, 12% Hispanic, and 3% Asian. Georgia has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 24.5% of 5 to 17 year-olds in Georgia were living in poverty. NCES also reports that for the most recent year available, 2009-10, 56.1% of students in Georgia were eligible for free or reduced price lunch.

School Organization

Georgia currently has 205 school districts and 109 charter schools. The number of charter schools in Georgia is declining. Eight charters opened, while ten charter schools closed in FY13, for a net loss of two charter schools. In FY2011, 2.5% of Georgia students attended charter schools. Georgian has an open enrollment program, but participation numbers are unavailable. Georgia has many large school districts that are organized by county; five districts in Georgia have over 50,000 students. The state also has 16 Regional Educational Service Agencies (RESAs), several-county organizations that coordinate school improvement initiatives for a group of school districts. Currently in Georgia, 60% of four-year-olds attend state sponsored preschool, 7% of four-year-olds attend a federal head start program, and 33% of four-year-olds attend private or no preschool (NIEER, 2012). 12% of elementary and secondary students in the state do not attend public school. Georgia adopted the Common Core standards with full implementation expected 2012-13. Georgia is not a member of either Common Core testing consortium. Georgia offers three early college programs: ACCEL, Dual Enrollment and Joint Enrollment.

School Finance System

The census bureau found that Georgia spent on average \$9,253 per pupil in public elementary and secondary school for FY2011. Georgia provides funding for schools through the 1986 Quality Basic Education (QBE) law (Doyle, Hassel & Locke, 2012). The complex funding formula divides the school day into six parts, and students are assigned to one of 19 academic programs for each part. Students with more educational needs are assigned to academic programs that feature more support and smaller classes, thus the system provides higher funding for students with greater needs. QBE provides additional funding to school districts based on a statewide teacher salary schedule, and also provides property tax equalization support and

categorical grants. In 2011, the Georgia legislature established the State Education Finance Study Commission to improve Georgia's QBE funding system (Georgia State Education Finance Commission, 2012). The Commission made several recommendations: expand technology infrastructure in classrooms, increase the number of school counselors, librarians, school nurses, and other support personnel, restructure professional learning, adjust equalization and capital funding programs, and simplify the QBE formulas by consolidating the 19 programs into 11. The commission did not, however, recommend a wholesale change to the state education funding formula.

Suggs (2013) suggests current school funding in Georgia is inadequate, citing the increasing number of disadvantaged students in the state, and a drop of 15% in education funding in the state since 2002. Georgia state school funding comes primarily from income tax revenue. Suggs points out that the state has failed to appropriate the full amount of education funding required by the QBE formula in every year since 2003. Declining property values has aggravated the school funding problem in Georgia, making it more difficult for local governments to replace lost state funding.

Achievement Results

According to NCES, Georgia's Average Freshman Graduation Rate for school year 2009-10 was 69.9%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 219, 39% of students were at Proficient or above.
- 4th Grade Math scale score of 236, 34% of students were at Proficient or above.
- 8th Grade Reading scale score of 259, 32% of students were at Proficient or above.
- 8th Grade Math scale score of 278, 39% of students were at Proficient or above.

IV. High Achieving States and Reform Leaders (MA, FL, MD, MN, NJ)

Massachusetts

Demographics

Massachusetts enrolled 955,563 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has changed slightly, and the 2010 enrollment reflected an almost 2% decline since 2005. The percentage distribution of white enrollment was 68%, and nonwhite enrollment of 32% included 8% African American, 15% Hispanic, and 6% Asian. Massachusetts has low rates of concentrated poverty. For 2011, NCES reports that 14.1% of 5 to 17 year-olds in Massachusetts were living in poverty. NCES also reports that for the most recent year available, 2009-10, 32.9% of students in Massachusetts were eligible for free or reduced price lunch.

School Organization

Massachusetts currently has 403 school districts and 80 charter schools. The state is selective in authorizing charter schools, with caps in place for the number of charters and the percent of students attending them. For-profit charter schools are prohibited. In FY2011, 3% of Massachusetts students attended charter schools. Massachusetts has an open enrollment program, but participation numbers are unavailable. Boston is the largest district in Massachusetts with 55,114 students in FY2013. The state has 6 District and School Assistance Centers (DSACs), organizations that coordinate professional development and systemic approaches to improve achievement for a group of school districts. Currently in Massachusetts, 18% of four year-olds attend state sponsored preschool (includes state sponsored special education), 8% of four year-olds attend a federal Head Start program, and 74% of four year-olds attend private or no preschool (NIEER, 2012). 13% percent of elementary and secondary students in the state do not attend public school. Massachusetts adopted the Common Core standards with full implementation expected 2013-14. Massachusetts is a member of the PARCC testing consortium. Massachusetts offers the Commonwealth Dual Enrollment Program (CDEP) for early college.

School Finance System

The census bureau found that Massachusetts spent on average \$13,941 per pupil in public elementary and secondary school for FY2011. In 1993, in response to McDuffy v. Secretary of the Executive Office of Education (415 Mass. 545, 615 N.E.2d 516) the State of Massachusetts substantially changed the funding of education to ensure that each district received money to

provide an adequate level of education. Schools in Massachusetts receive state foundation aid based on the state foundation budget, which is established annually, and reflects a minimum spending target for the school district to provide an adequate education. The foundation budget recognizes that different types of students require different levels of resources, and is calculated

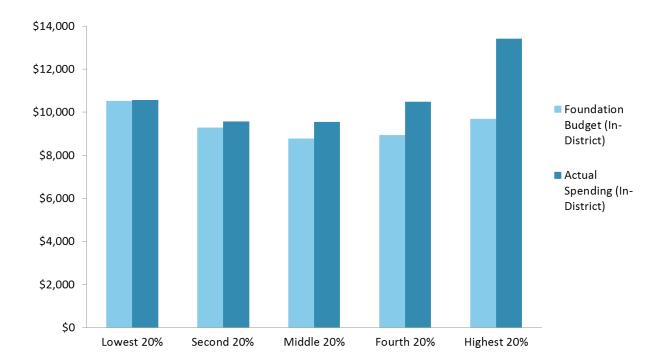


Figure 2. District Per Pupil Spending by Wealth Quintile in Massachusetts in 2010 (Shuster, 2011)

using weights for different student characteristics including grade, at-risk, English language learner, etc. The budget is adjusted yearly for inflation and reflects differing labor costs by location. Low-income and special education students are allocated an additional increase of around 50%. Further, the legislature developed an "aggregate wealth model" that uses property wealth and personal income to calculate local school tax revenue targets so that similar communities receive similar aid from the state and state aid is directed to where it is needed most. Local property taxes currently provide more than 60% of school revenues. The foundation budget is a target for spending, but most districts in Massachusetts spend about 20% more. There are no spending or property tax caps for districts (Massachusetts Department of Elementary and Secondary Education, 2013). Figure 2 shows the Foundation Budget and actual

spending levels by wealth quintile for 2010. The graph shows how wealthy districts in Massachusetts enhance educational spending through additional property tax revenues.

Achievement Results

According to NCES, Massachusetts's Average Freshman Graduation Rate for school year 2009-10 was 82.6%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 236, 48% of students were at Proficient or above.
- 4th Grade Math scale score of 252, 60% of students were at Proficient or above.
- 8th Grade Reading scale score of 273, 48% of students were at Proficient or above.
- 8th Grade Math scale score of 299, 54% of students were at Proficient or above.

Florida

Demographics

Florida enrolled 2,643,347 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has changed slightly, and the 2010 enrollment reflected a 1% decline since 2005. The percentage distribution of white enrollment was 43%, and nonwhite enrollment of 57% included 23% African American, 28% Hispanic, and 3% Asian. Florida has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 23.3% of 5 to 17 year-olds in Florida were living in poverty. NCES also reports that for the most recent year available, 2009-10, 53.5% of students in Florida were eligible for free or reduced price lunch.

School Organization

Florida currently has 67 school districts and 583 charter schools. The state is considered "charter friendly", allowing on-line learning, student selection at charter schools, equitable charter funding, including facilities funding, and charter participation in extracurricular activities at the traditional public school. In FY2011, 6% of Florida students attended charter schools.

Florida offers an inter-district choice program, called "Controlled Open Enrollment", where approximately 342,000 students elect to attend a neighboring public school district each year. Miami-Dade is the largest district in Florida with 347,366 students in FY2011, but due to the county-wide organization of school districts, districts in Florida are large, with 14 districts educating more than 50,000 students. Florida has been proactive in providing public preschool for everyone. Currently in Florida, 79% of four year-olds attend state sponsored preschool, 9% of four year-olds attend a federal Head Start program, and 11% of four year-olds attend private or no preschool (NIEER, 2012). 14% percent of elementary and secondary students in the state do not attend public school. Florida adopted the Common Core standards with full implementation expected 2014-15. Florida is a member of the PARCC testing consortium. Florida offers an Early College/Dual Enrollment program for high school students.

School Finance System

The census bureau found that Florida spent on average \$8,887 per pupil in public elementary and secondary school for FY2011. Florida funds its schools using a per pupil base allocation that includes weights for grade, special needs, English language learners, and career/technical education. Added to the weights are a long list of factors: declining enrollment supplement, sparsity supplement, special education (called ESE) guaranteed allocation, safe schools, Department of Juvenile Justice allocation, supplemental academic instruction, reading instruction allocation, teacher merit award, .748 millage compression (equalization), .25 millage compression, lab school/virtual school contribution, instructional materials, transportation, teachers lead program, and minimum guarantee. Finally, Florida also has several categorical programs: the district lottery and school recognition Program, and class size reduction. Florida ranked 42nd in per pupil expenditures for education and 50th in public education financing per \$1000 personal income, suggesting that education funding levels and teacher salaries are relatively low (Florida Department of Education, 2013).

Education revenue in Florida is generated by a sales tax and property taxes. School property taxes include two state controlled millages, the required local effort, and prior period funding adjustment. Several property tax millages can be enacted by the school district without voter approval, including the current operating discretionary millage (.748), the local capital

improvement millage (max 1.5 mills), and the capital improvement discretionary millage (max .25 mills). Voter approval is required for the critical needs operating or critical needs capital millage (both .25 mills max), the 2 year operating or capital millage, and the 4 year additional millage. School districts are able to increase their revenues, however, with voter permission.

Achievement Results

According to NCES, Florida's's Average Freshman Graduation Rate for school year 2009-10 was 80.8%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 224, 39% of students were at Proficient or above.
- 4th Grade Math scale score of 242, 40% of students were at Proficient or above.
- 8th Grade Reading scale score of 260, 33% of students were at Proficient or above.
- 8th Grade Math scale score of 279, 31% of students were at Proficient or above.

Minnesota

Demographics

Minnesota enrolled 838,037 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has been stable, and the 2010 enrollment reflected a slight 0.1% decline since 2005. The percentage distribution of white enrollment was 74%, and nonwhite enrollment of 26% included 9% African American, 7% Hispanic, and 6% Asian. Minnesota has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 12.7% of 5 to 17 year-olds in Minnesota were living in poverty. NCES also reports that for the most recent year available, 2009-10, 35.5% of students in Minnesota were eligible for free or reduced price lunch.

School Organization

Minnesota currently has 488 school districts and 148 charter schools. The state was the first state to authorize a charter school, and is considered "choice friendly", allowing on-line learning, for-profit charter school operation, and multiple charter authorizers. In FY2011, 4.5% of Minnesota students attended charter schools. Minnesota also offers choice through open

enrollment, and approximately 35,000 students participate each year. Minnesota has three school districts with over 30,000 student enrolled: Minneapolis, St. Paul, and Anoka-Hennepin. Anoka-Hennepin is the largest district in Minnesota with 38,380 students in FY2012. The state also has 9 Regional Service Cooperatives, which provide support for schools including professional development, cooperative purchasing, insurance programs, academic enrichment programs, and technology services (Garcia, Shimmel, & Wraight, 2011). Currently in Minnesota, 7% of four-year-olds attend state sponsored preschool, 8% of four-year-olds attend a federal head start program, and 85% of four-year-olds attend private or no preschool (NIEER, 2012). 14% of elementary and secondary students in the state do not attend public school. Minnesota adopted the Common Core English Language Arts standards but did not adopt the Common Core math standards. Minnesota is not a member of either Common Core testing consortium. Minnesota offers a Post-secondary Enrollment Options program (PSEO) for early college that allows Minnesota's high school juniors and seniors to register for regular college courses.

School Finance System

The census bureau found that Minnesota spent on average \$10,712 per pupil in public elementary and secondary school for FY2011. Minnesota has a fairly complex school funding system (Minnesota House Research Department, 2012). To determine general education revenue, the state starts with a basic allowance and makes twelve adjustments: 1) Extended time revenue, for students involved in after school or summer school programs, 2) Basic skills revenue for at-risk and ELL students, this is adjusted by the concentration of such students in a district, 3) gifted and talented, \$12 per pupil, 4) Operating sparsity revenue is additional revenue for geographically large districts with relatively few secondary students, 5) Transportation sparsity revenue. General transportation revenue is included in the basic allowance, but transportation sparsity revenue is added based on a district density and sparsity index. 6) Operating Capital Revenue is added to the basic allowance and must be used for equipment and facilities purposes. Districts may raise other local funds for capital needs.7) Equity Revenue, revenue from the state intended to supplement revenue in districts that are unable to raise referendum (property tax) revenue 8) small schools revenue is a supplement for school districts that serve less than 1000 pupils (not including charter schools) 9) alternative compensation

revenue provides teacher incentive pay revenue for the Q-comp program 10) Transition revenue to help districts adjust to the revised funding system in 2003, 11) Pension adjustments (there are four), and 12) Options adjustment based on enrollment changes made under student movement programs. Minnesota's pupil count methodology incorporates district enrollment data for the present and the previous year to help lessen the impact of declining enrollment. Pupils are weighted by grade level, with secondary students receiving approximately 20% more. In 2012, the Minnesota legislature convened a working group to evaluate and recommend improvements to the state education funding system (Minnesota Department of Education, 2012). The working group expressed concerns over an overreliance on referendum levies by many districts in the state, inequities in funding and achievement gaps, the failure of education funding to keep up with inflation, and the complexity of the existing state funding system.

Achievement Results

According to NCES, Minnesota's Average Freshman Graduation Rate for school year 2009-10 was 88.2%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 225, 41% of students were at Proficient or above.
- 4th Grade Math scale score of 249, 59% of students were at Proficient or above.
- 8th Grade Reading scale score of 268, 40% of students were at Proficient or above.
- 8th Grade Math scale score of 294, 47% of students were at Proficient or above.

Maryland

Demographics

Maryland enrolled 852,211 students in public elementary and secondary school in 2010, according to the National Center for Education Statistics (NCES). School enrollment has stable, and the 2010 enrollment reflected a slight, almost 1% decline since 2005. The percentage distribution of white enrollment was 43%, and nonwhite enrollment of 57% included 36% African American, 11% Hispanic, and 6% Asian. Maryland has several urban communities with high rates of concentrated poverty. For 2011, NCES reports that 12.5% of 5 to 17 year-olds in

Maryland were living in poverty. NCES also reports that for the most recent year available, 2009-10, 48.3% of students in Maryland were eligible for free or reduced price lunch.

School Organization

Maryland currently has only 24 school districts and 52 charter schools. The state is not considered "choice friendly", but allows on-line learning and slow growth of charter schools. In FY2011, 1.7% of Maryland students attended charter schools. Maryland does not offer open enrollment as a choice option for students. Six Maryland school districts serve over 50,000 students, and the largest district in the state is the Montgomery County School district, with 144,023 students. Currently in Maryland, 40% of four year-olds attend state sponsored preschool (includes state sponsored special education), 6% of four year-olds attend a federal Head Start program, and 54% of four year-olds attend private or no preschool. 18% of elementary and secondary students in the state do not attend public school. Maryland adopted the Common Core standards with full implementation expected 2013-14. Maryland is a member of the PARCC testing consortium. Maryland allows high school students to be dually enrolled in a high school and an institution of higher education.

School Finance System

The census bureau found that Maryland spent on average \$13,871 per pupil in public elementary and secondary school for FY2011. Maryland adopted its current education finance system in 2002 with the "Bridge to Excellence Act" (Scafidi, 2008). This Act increased school funding over 24% during the period from FY2003 to FY2007. Increases in school funding were paid for with a \$0.34 per pack increase in the cigarette tax. The majority of the funding increase was used by school districts to lower pupil-staff ratios. The current system has eight pieces: 1) Foundation Program, 2) Geographical Cost of Education Index, 3) Transportation funding, 4) Compensatory funding for at-risk students, 5) Funding for Limited English Proficient Students, 6) Special Education funding, 7) a Guaranteed Tax Base Program, and 8) Supplemental Grants to school systems. The foundation program provides a target, base amount of funding for each student. This amount is not adjusted based on student characteristics, but the state does adjust the local share based on property wealth and requires districts to levy local taxes to cover their share in order to receive state funds. The foundation amount increases each year with inflation.

The Geographical Cost of Education Index (GCEI) directs more state funding to school districts where costs are higher due to location factors. Funding formulas for At-risk students, English language learners, and special education students are complicated, but in general include an adjustment for the size of enrollment in the programs at a given district, and the property wealth of that district. The Guaranteed tax base program provides extra funding for districts that have less than 80% of the statewide average wealth per pupil. Supplemental grants are used to ensure that districts receive at least a 1% increase in total state funding each year. In addition to this eight part funding system, the state of Maryland also provides funding for the teachers' pension fund, and for capital and facilities projects.

Achievement Results

According to NCES, Maryland's Average Freshman Graduation Rate for school year 2009-10 was 82.2%. NAEP scores from 2011 are as follows:

- 4th Grade Reading scale score of 225, 44% of students were at Proficient or above.
- 4th Grade Math scale score of 244, 46% of students were at Proficient or above.
- 8th Grade Reading scale score of 265, 43% of students were at Proficient or above.
- 8th Grade Math scale score of 288, 38% of students were at Proficient or above.

Appendix A : Summary of State Statistics

Midwest States

State	Michigan	Ohio	Indiana	Georgia	Wisconsin
School Organization					
Number of Districts	549	613	321	205	426
ISDs?	57	55	9	Y	12
Number of Charters (FY2013)	280	369	75	109	243
Number of students (2010 from Census)	1,523,786	1,669,748	1,026,101	1,660,643	872,286
Number of students (2011 from Census)	1,455,966	1,655,534	1,023,220	1,666,039	
% Enrollment Growth or decline	-4.5%	-0.9%	-0.3%	0.3%	-0.3%
Charter School Enrollment (FY2013)					
	134,896	113,105	35,118	60,547	43,951
Cyber?	Y	Y	Y	Y	Y
Schools of choice?	Y-100,000	Y-63,000	New	Y	Y-30,000
			2013		
% public school (FY2009)	88	85	86	88	84
% not public - private/homeschooled	12	15	14	12	16
PreK 4 year old Enrollment %	19	2	0	59*	69
Early college/post-secondary interface					
Common Core standards?	Y?	Y	Y	Y	Y
Race To The Top participant	Y	Y		Y	Y
RTTT finalist	N	Y		Y	Y
RTTT winner	N	Y		Y	Y
Achievement					
NAEP% >= proficient - 4th Reading (34)	37	48	52	39	36
NAEP% >= proficient - 4th Math (41)	30	38	37	34	45
NAEP% >= proficient - 8th Reading (34)	33	39	35	32	33
NAEP% >= proficient - 8th Math (34)	31	41	38	39	39
NAEP Score – 4 th Reading (221)	217	224	225	222	221
NAEP Score – 4 th Math (241)	237	246	240	240	245
NAEP Score – 8 th Reading (266)	266	269	267	265	268

NAEP Score – 8 th Math (284)	280	290	288	279	287
Demographics					
% FRPL	42	36	42	53	37
Poverty Rate	18	18	16	20	17
% enrolled >30% Concentrated poverty	21	20	9	17	
School Finance					
PP Spending Total 2011 (US=10560)	10823	11223	9370	9253	11,774
PP Spending Rank (From 2011 Census)	22	16	26	37	18
% Federal (US=12.3)	13.7	11.1	8.6	12.6	8.8
% State (US=44.4)	53.5	43.2	61.9	41.6	45.8
% Local (US=43.3)	32.8	45.7	29.4	45.9	45.4
Funding trend since 2008 (CBPP)	-9.0%	-0.4%	??	-14.8%	-15.3%
95-5 percentile expenditure gap(1) (2)	5000				
Inflation Adjusted Funding?		N			N
Weights for grade level	N	N			N
Weights for wages, COLA	N	Y			N
Weights for At-Risk	Y	Y			N
Weights for Special Ed	N	Y			N
Weights for ELL	N				N
Census funding for Special Ed	N				
Caps on Local revenue?	Y	N			N
Capital funding - state support?	N	Y			
Pension fund UAAL	17 B	40.7 B	11.1 B	9.1 B	50 M
Retirement: Employer contribution rate	14.3 or 24*	14	7.5	11.4	5.9
Retirement: Employee contribution rate	11.4	10	3	6	6.7
Retirement DC, DB, Hybrid	Hybrid	Choice	Hybrid	DB	DB
Retirement % funded 2012	71.1	58.8	44.3	85.7	99
Do teachers participate in Social	Y	N	Y	Some	
Security					

Other States

State	Minnesota	Massachusetts	Florida	Maryland
School Organization				
Number of Districts	488	403	67	24
ISDs?	9			
Number of Charters (FY2013)	148	80	583	52
Number of students (2010 from Census)	801,494			
		929,569	2,627,390	848,252
Number of students (2011 from Census)	798,891	024 002	2 626 404	051 071
% Enrollment Growth or decline	-0.3%	924,903	2,636,404 0.3%	851,971 0.4%
Charter School Enrollment (FY2013)	41,777	-0.3%	0.5%	0.4%
Charter School Enrollment (F12013)	41,///	33,897	213,651	20,717
Cyber?	Y	Y	Y 2011	Y
Schools of choice/Open Enrollment?	Y - 35,000	Y	Y-342,000	N
% public school (FY2009)	86	87	86	82
% not public - private/homeschooled	14	13	14	18
PreK 4 year old Enrollment %	1	14	79*	35
Early college/post-secondary interface				
Common Core standards?	N	Y	Y	Y
Race To The Top participant	N	Y	Y	Y
RTTT finalist	N	Y	Y	Y
RTTT winner	N	Y	Y	Y
Achievement (U.S. Average)				
NAEP% >= proficient - 4th Reading (34)	41	48	39	44
NAEP% >= proficient - 4th Math (41)	59	60	40	46
NAEP% >= proficient - 8th Reading (34)	40	48	33	43
NAEP% >= proficient - 8th Math (34)	47	54	31	38
NAEP Score – 4 th Reading (221)	227	232	227	232
NAEP Score – 4 th Math (241)	245	253	242	253
NAEP Score – 8 th Reading (266)	271	277	266	274
NAEP Score – 8 th Math (284)	295	301	281	287
Demographics				
% FRPL	33	31	50	35
Poverty Rate	12	11	19	10
% enrolled >30% Concentrated poverty	6	5	1	0
School Finance				
PP Spending Total 2011 (US=10560)	10712	13941	8887	13871
PP Spending Rank (From 2011 Census)	17	8	42	11
% Federal (US=12.3)	7.8	7.8	17.8	9.3
% State (US=44.4)	58.5	37.9	34.3	41
% Local (US=43.3)	33.7	54.2	47.9	49.7

Funding trend since 2008 (CBPP)	0.3%	6.0%	-3.9%	6.1%
95-5 percentile expenditure gap(1) (2)	31%	4000		
Inflation Adjusted Funding?	Goal	Y	N	Y
Weights for grade level	N	Y	Y	N
Weights for wages, COLA	N	Y	Y	Y
Weights for At-Risk	Y	Y		Y
Weights for Special Ed	Y	N	Y	Y
Weights for ELL	Y	Y	Y	
Census funding for Special Ed	N	Y	N	N
Caps on Local revenue?	N	N		Y
Capital funding - state support?	Y		Y	Y
Pension fund UAAL		15.34 B	19 B	9.4 B
Retirement: Employer contribution rate	13.2	22.6	3.8	15.5
Retirement: Employee contribution rate	6.5	11	3	7
Retirement DC, DB, Hybrid	DB	DB	Choice	DB
Retirement % funded 2012	77.3	60	86.9	64.7
Do teachers participate in Social Security	Y	N	Y	Y

References

- Addonizio, M. & Kearney, C. (2012). *Education Reform and the Limits of Policy*, Kalamazoo, MI: Upjohn Institute for Employment Research
- Arsen, D. & Plank, D. (2003). *Michigan School Finance Under Proposal A: State Control, Local Consequences*, Education Policy Center at Michigan State Working Paper, East Lansing, MI.
- Baker, B. & Corcoran, S. (2012). The Stealth Inequities of School Funding, Washington, DC: Center for American Progress, retrieved from http://www.americanprogress.org/wp-content/uploads/2012/09/StealthInequities.pdf
- Baker, B., Sciarra, D. & Farrie, D. (2012). *Is School Funding Fair? A National Report Card*, Newark, N.J., Education Law Center
- Chetty, R., Friedman, J. & Rockoff, J. (2011). The Long-term Impacts of Teachers: Teacher Value-added and Student Outcomes in Adulthood, working paper
- Citizens Research Council of Michigan (2011). *Distribution of State Aid to Michigan Schools*, Report 371, Livonia, MI: author
- Doherty, K., Jacobs, S. & Madden, T. (2013). No One Benefits: How Teacher Pension Systems are Failing Both Teachers and Taxpayers, *National Council on Teacher Quality*, Washington D.C.: author
- Doyle, D. Hassel, B. & Locke, G. (2012). *Smarter Funding, Better Outcomes: Georgia's roadmap for K-12 finance reform*, Chapel Hill, NC: Public Impact, and Atlanta, GA: Chamber of Commerce. Retrieved from www.smartk12funding.com
- Education Law Center of Pennsylvania (2013). Funding, Formulas, and Fairness: What Pennsylvania can learn from Other States' Education Funding Formulas, Philadelphia, PA: author
- Florida Department of Education (2013). 2012-13 Funding for Florida School Districts, Tallahassee, FL: author
- Garcia, A., Shimmel, L., & Wraight, S. 2011. *Characteristics of State Educational Service Agencies*, Naperville, IL: REL Midwest, retrieved from http://www.isbe.state.il.us/siroec/pdf/char_midwest_ed_agencies_030512.pdf

- Georgia State Education Finance Commission (2012). *Summary of Recommendations*, Atlanta, GA: author
- Hanushek, E. (1986). The Economies of Schooling: Production and Efficiency in Public Schools, *Journal of Economic Literature*, 24(3), p. 1141-1177
- Hanushek, E. (1997). Assessing the Effects of School Resources on Student Performance: An Update, *Educational Evaluation and Policy Analysis*, 19(2), p. 141-164.
- Indiana Department of Education (2011). *Digest of Public School Finance in Indiana*, Indianapolis, IN: author
- Izraeli, O. & Murphy, K. (2007). The Impact of Proposal A on School Financing, Equity, and the Quality of Public Schools in the State of Michigan, *Journal of Education Finance*, *33*(2), p. 111-129.
- Kane, T. & Staiger, D. (2008). Estimating Teacher Impacts on Student Achievement: An Experimental Evaluation, NBER Working Paper 14607
- Kids Count Data Center (2011). Children Aged 3 to 5 Not Enrolled in Preschool or Kindergarten, retrieved from http://datacenter.kidscount.org/data/tables/5109-children-ages-3-to-5-not-enrolled-in-nursery-school-preschool-or-kindergarten?loc=1&loct=2#ranking/2/any/true/867/any/11548
- Leachman, M. & Mai, C. (2013). Most States Funding Schools Less Than Before the Recession, *Center on Budget and Policy Priorities*, Washington, D.C.
- Massachusetts Department of Elementary and Secondary Education (2013). Report on the Status of the Public Education Financing System in Massachusetts, Maiden, MA: author
- Minnesota Department of Education (2012). *Education Finance Working Group Recommendations and Report*, St. Paul, MN: author
- Minnesota House Research Department (2012). *Minnesota School Finance: A Guide for Legislators*, St. Paul, MN: author
- Miron, G. (2008). Education Management Organizations, in Ladd, H. & Fiske, E. eds, *Handbook of Research in Education Finance and Policy*, New York: Routledge

- Molnar, A. (1996). Charter Schools: The Smiling Face of Disinvestment, *Educational Leadership*, 54(2), p. 9-15.
- National Institute for Early Education Research (2012). *The State of Preschool 2012: State Profiles*, retrieved from http://nieer.org/publications/state-preschool-2012-state-profiles
- National Working Group on Funding Student Learning (2008). Funding Student Learning: How to Align Education Resources with Student Learning Goals, Seattle, WA: author
- Ravitch, D. (2013). Reign of Error: The Hoax of the Privatization Movement and the Danger to America's Public Schools, New York: Alfred A. Knopf
- Scafidi, B. (2008). *The Formula Behind Maryland's K-12 Funding*, The Friedman Foundation for Educational Choice and Maryland Public Policy Institute, Rockville, MD
- Schultz, T. (1959), Investment in Man: An Economist's View, *The Social Service Review*, 33(2), p. 109-117.
- Schuster, L. (2011). Cutting Class: Underfunding the Foundation Budget's Core Education Program, Massachusetts Budget and Policy Center, retrieved from http://www.massbudget.org/report_window.php?loc=Cutting_Class.html
- Spradlin, T. Robbins, H., Popely, J. & Lara, L. (2011). *Understanding the History of Indiana School Finance and the Current Funding Formula*, Center for Evaluation & Education Policy, Bloomington, IN: Indiana University
- Stokes, K. (2012). Why Some Worry Property Tax Caps will Lead to 'Inequities' in School Funding, State Impact, NPR, retrieved from http://indianapublicmedia.org/stateimpact/2012/10/09/why-some-worry-property-tax-caps-will-lead-to-inequities-in-school-funding/
- Suggs, C. (2013). The Schoolhouse Squeeze, Atlanta, GA: Georgia Budget and Policy Institute
- Wiggins, A. (2013). Charter School Gravy Train Runs Express to Fat City, Forbes, 10
 September, 2013, Retrieved from
 http://www.forbes.com/sites/greatspeculations/2013/09/10/charter-school-gravy-train-runs-express-to-fat-city/
- Wisconsin Association of School Boards (2012). *School Finance 101*, retrieved from http://www.wasb.org/websites/communications/File/school_finance_101_web.pdf

Yinger, J. (2004). State Aid and the Pursuit of Educational Equity: An Overview, in Yinger, J. (Ed.) *Helping Children Left Behind: State Aid and the Pursuit of Educational Equity*, Cambridge, MA: MIT Press